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Amendments to the Claims

Please amend the claims as follows:

1. (Currently Amended) A method of providing a tone reproduction curve relating to a first image, the tone reproduction curve defined by at least three points selected from the group consisting of an original minimum color value, an original maximum color value, and a user specified control point (USCP) that represents a change in color value from an original color value in an image to a desired color value, the method comprising:

defining at least one threshold color value, the threshold color value defining a threshold color value in relationship to at least one of the original minimum color value or the original maximum color value, the threshold color value defining a threshold where if the USCP lies either between an original minimum color value and ~~its associated~~ a minimum threshold color value defined in relationship therewith or between an original maximum color value and ~~its second associated~~ a maximum threshold color value defined in relationship therewith, the original minimum or maximum color value associated with that threshold is conceptually moved farther from the position of ~~the threshold with which~~ that original minimum or maximum color value ~~is associated~~ to form a conceptual minimum color value or conceptual maximum color value, and

then creating a monotonic tone reproduction curve through:

a) the conceptual minimum color value or conceptual maximum color value,

b) the USCP, and

c) the original minimum color value or original maximum color value that was not associated with the threshold.

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2. (Original) The method of claim 1 wherein the monotonic tone reproduction curve restricts color values that may be selected for imaging from the curve to color values between the original maximum color value and the original minimum color value.

3. (Currently Amended) The method of claim [[2]] 1 wherein the monotonic tone reproduction curve is created by selecting a first color to be corrected, selecting a second color to replace the first color, and using the first and second color to define the USCP.

4. (Original) The method of claim 1 wherein the tone reproduction curve comprises a spline curve.

5. (Original) The method of claim 1 wherein the tone reproduction curve comprises a cubic spline curve.

6. (Original) The method of claim 3 wherein the second color is chosen by an operator selecting a color from within the first image.

7. (Original) The method of claim 3 wherein the second color is chosen by an operator selecting a color from a second image.

8. (Original) The method of claim 3 wherein the second color is chosen by an operator selecting a color from a stored collection of colors.

9. (Original) The method of claim 3 wherein the second color is selected by an operator selecting a color from memory colors.

10. (Currently Amended) The method of claim [[6]] 8 wherein the stored collection of colors is stored as generic named files having species sub-files of named colors listed in the generic named files.

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11. (Currently Amended) The method of claim [[7]] 10 wherein the generic named files comprise at least one generic named file selected from the group consisting of vegetation, grass, grasses, foliage, skin tones, flesh tones, trees, sky, wood, eyes, hair, fruits, vegetables, water, sun, dawn, dusk, sunrise, sunset, foods, beverages, eye colors, metals, stained glass colors, primary colors, achromatic colors, and animals.

12. (Original) The method of claim 1 wherein the monotonic tone reproduction curve restricts color values that may be selected for imaging from the curve to color values available from an associated image reproduction system.

13. (Currently Amended) A color correction system for correcting colors in a color image comprising:

coordinates for registering points in a first color space of at least one standard point, the first color space having axes for specifying colors;

a second set of coordinates for registering points in a second color space of at least one standard point, the second color space having axes that include at least one coordinate for specifying color hues;

a translator to convert image data from at least one point in the first color space to coordinates in the second color space;

a modifier for modifying at least hue within image data in the second color space to form corrected image data in the second color space, whereby the modifier is adapted to determine whether a user specified control point is within a threshold defined adjacent an original maximum or minimum color value and adapted to move outside the range of original maximum or minimum color values when the user specified control point is within such a threshold of the maximum or minimum limits of color values to create a conceptual maximum or minimum color value, the modifier also being adapted to generate a color correction curve using a user specified control point, one of an original maximum or minimum color value and one of a conceptual maximum or minimum color value;

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a translator for transferring corrected image data in the second color space to corrected image data in the first color space.

14. (Currently Amended) The color ~~device~~ correction system of claim 13 wherein all points are provided within a tone reproduction curve.

15. (Currently Amended) The color correction ~~device~~ system of claim [[10]] 13 wherein the modifier corrects hue and at least one other color component selected from lightness, chroma and saturation in the second color space.

16. (Currently Amended) The color correction ~~device~~ system of claim [[11]] 13 wherein the modifier corrects hue and at least two other color components selected from the group consisting of chroma, lightness and saturation in the second color space.

17. (Currently Amended) The color correction ~~device~~ system of claim [[10]] 13 wherein the first color space comprises a three-color color space.

18. (Currently Amended) The color correction ~~device~~ system of claim [[11]] 13 wherein the first color space comprises a three-color color space of red, green and blue.

19. (Currently Amended) A method for correcting colors in a color image comprising:

providing image data of points in a first color space, the first color space having axes for specifying colors;

converting image data points in the first color space into image data points in a second color space, the second color space having coordinates that include at least one coordinate for hue for specifying colors;

modifying at least hue of at least some data points within image data in the second color space to form corrected image data in the second color space, whereby this modifying provides for determining whether a user specified control point is within a threshold defined adjacent an original maximum or minimum color value and for movement outside the range of original maximum or minimum color values when the user specified control point is within such a threshold of the maximum or minimum limits of color values to create a conceptual maximum or minimum color value, the modifying also providing for generating a color correction curve using a user specified control point, one of an original maximum or minimum color value and one of a conceptual maximum or minimum color value;

transferring corrected image data in the second color space to the first color space as corrected data.

20. (Currently Amended) The method of claim [[15]] 19 wherein the first color space defines colors in color channels.

21. (Currently Amended) The method of claim [[15]] 19 wherein the first color space defines colors in color channels of red, green and blue.

22. (Currently Amended) The method of claim [[15]] 19 wherein modifying at least hue comprises modifying hue and at least one other color space component selected from the group consisting of lightness and saturation.

23. (Currently Amended) The method of claim [[15]] 19 wherein modifying at least hue comprises modifying hue and both lightness and saturation.

24. (Currently Amended) The method of claim [[15]] 19 wherein modifying is effected by a procedure selected from the group consisting of selecting specific image color data to replace converted image data in the second color space, selecting a palette from which to select a specific color to replace converted image data in the second color space, and selecting colors from a look-up table.

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25. (Currently Amended) The process of claim [[15]] 19 wherein image data points in the first color space are selected for correction by application of a pointer to a representation of the image.

26. (Currently Amended) The process of claim [[15]] 19 wherein upon modifying image data in the second color space, and where there is no direction given in the modification to alter saturation, a predetermined amount of change in saturation is provided into image data in the second color space to cause a slight visual change of the image.

27. (New) A computer readable medium having computer executable instructions for performing steps comprising:

providing image data of points in a first color space, the first color space having axes for specifying colors;

converting image data points in the first color space into image data points in a second color space, the second color space having coordinates that include at least one coordinate for hue for specifying colors;

modifying at least hue of at least some data points within image data in the second color space to form corrected image data in the second color space, whereby this modifying provides for determining whether a user specified control point is within a threshold defined adjacent an original maximum or minimum color value and for movement outside the range of original maximum or minimum color values when the user specified control point is within such a threshold of the maximum or minimum limits of color values to create a conceptual maximum or minimum color value, the modifying also providing for generating a color correction curve using a user specified control point, one of an original maximum or minimum color value and one of a conceptual maximum or minimum color value;

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transferring corrected image data in the second color space to the first color space as corrected data.

28. (New) A computer readable medium having computer executable instructions for performing steps comprising:

providing a tone reproduction curve relating to a first image, the tone reproduction curve defined by at least three points selected from the group consisting of an original minimum color value, an original maximum color value, and a user specified control point (USCP) that represents a change in color value from an original color value in an image to a desired color value;

defining at least one threshold color value, the threshold color value defining a threshold color value in relationship to at least one of the original minimum color value or the original maximum color value, the threshold color value defining a threshold where if the USCP lies either between an original minimum color value and a minimum threshold color value defined in relationship therewith or between an original maximum color value and a maximum threshold color value defined in relationship therewith, the original minimum or maximum color value associated with that threshold is conceptually moved farther from the position of that original minimum or maximum color value to form a conceptual minimum color value or conceptual maximum color value, and

then creating a monotonic tone reproduction curve through:

a) the conceptual minimum color value or conceptual maximum color value,

b) the USCP, and

c) the original minimum color value or original maximum color value that was not associated with the threshold.

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29. (New) A computer readable medium having computer executable instructions for performing steps comprising:

establishing color range limits for a color image to be subjected to color modification, the color range limits including an original minimum color value and an original maximum color value;

establishing a user specified control point (USCP) representative of a first color to be modified and a second color to replace the first color;

defining at least one threshold color value, the threshold color value defining a threshold color value in relationship to at least one of the original minimum color value or the original maximum color value;

determining whether the USCP lies either between an original minimum color value and a minimum threshold color value defined in relationship therewith or between an original maximum color value and a maximum threshold color value defined in relationship therewith,

moving the original minimum color value or the original maximum color value conceptually farther from the position of that original minimum or maximum color value to form a conceptual minimum color value or conceptual maximum color value, if the USCP has been determined to be within the threshold of the determining step; and

then creating a monotonic tone reproduction curve through:

a) the conceptual minimum color value or conceptual maximum color value,

b) the USCP, and

c) the original minimum color value or original maximum color value that was not associated with the threshold.